





Electronic Warfare Information Operations

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Mission

"Enhancing critical <u>national security</u> capabilities by providing technical expertise and transitioning essential technologies utilizing the Electromagnetic Spectrum which are vital to both <u>defensive and offensive operations</u> in the Air, Ground, Maritime, and Space Domains"

Vision

"Provide <u>national thought leadership</u> for Department of Defense and other agencies to control the Electromagnetic Spectrum by creating innovative Electronic Warfare / Information Operations capabilities to satisfy urgent national security requirements."



Strategic Themes

- National Leadership
- Advocacy of the Electronic Warfare / **Information Operations Product Line**
- Total Life Cycle Support
- Customer Base Broadening
- Technology Transition



Five Critical Areas

- Electronic Warfare / Information Operations Leadership
- Spectrum Management / Cyber Warfare
- Irregular Warfare
- Sensor Integration
- Technology Transition



Electronic Warfare / Information Operations Leadership

GOAL

 Become a <u>nationally recognized leader</u> in Electronic Warfare / Information Operations

RATIONALE

Address the STRATCOM JEWC #1 CBA gap

- Provide US Navy Center of Excellence <u>leadership</u> for the Electronic Warfare technical community
- Provide Electronic Attack, Electronic Warfare Support and EP <u>sensor expertise</u> to meet the increasing demand for Spectrum Mgmt, Cyber Warfare and Irregular Warfare
- Develop <u>multi-spectral</u>, <u>multi-domain solutions</u> to support Department of Defense, Other Government Agency and coalition partner "joint" efforts



Spectrum Management / Cyber Warfare

GOAL

• Provide Electronic Warfare / Information Operations expertise for the <u>electromagnetic spectrum</u>

RATIONALE

Cyber operations are more dependent on wireless infrastructures
& will become more vulnerable to Electronic Warfare exploitation

- Provide Electronic Warfare expertise to new and realigned organizations responsible for the Electromagnetic Spectrum
- Apply Electronic Warfare capabilities to support <u>cyber, knowledge</u> <u>& Information's Technology, communications & networks, & tactical information systems</u>
- Expand cyber space <u>computer network ops</u> (CNO) and critical infrastructure protection capabilities
- Provide <u>integrated Electronic Warfare / Information Operations</u>, <u>Irregular Warfare & cyber</u> capabilities to enable non-kinetic solutions for national security issues



Irregular Warfare

GOAL

Support the shift to address <u>Irregular Warfare</u>, catastrophic and disruptive challenges while sustaining traditional capabilities

RATIONALE

There is a focus on intelligence, surveillance and reconnaissance (ISR), anti-terrorism/force protection (AT/FP), and cyber in support of extended customer set

- Provide <u>Signals Intelligence (SIGINT)</u> expertise to the Irregular Warfare and other communities to meet national security challenges
- Integrate multiple source data into a <u>common operating</u> picture (COP) to identify threats and gaps
- Increase expeditionary expertise to ground and littoral program offices expanding Electronic Warfare, cyber & ISR capabilities



Sensor Integration

GOAL

Develop <u>integrated sensors</u> capabilities

RATIONALE

 There is increased emphasis on multi-function, multi-band, multibeam wide-band arrays capable of Electronic Warfare, communication and radar functions

- Integrate Radio Frequency/Electro Optic/Infra-Red/Infra-red Counter Measures / Electronic Warfare Sensors in a robust, <u>Operational</u> <u>Assessment framework</u>
- Develop <u>expanded Electronic Protect</u> capabilities to maintain friendly use of the spectrum to support sensors & weapons systems
- Enhance <u>Electronic Attack and Electronic Warfare Support</u> capabilities in new areas of the spectrum to deny enemy use of the spectrum
- Integrate sensor capabilities into the <u>Unmanned Systems and</u> Electronic



Technology Transition

GOAL

Increase <u>S&T capabilities</u> to end users

RATIONALE

 There is focus on acceleration of Fleet Science & Technology capabilities

- Continue development of the Naval Electronic Warfare Technology Integration Center (NEWTIC) data analysis tool to <u>identify and analyze threats and countermeasures</u>
- Continue to conduct NEWTIC technology summits to identify <u>potential countermeasures</u> to threats and gaps
- Establish technology transition agreements and/or MoAs with service labs, national Labs, and acquisition PMs
- Collaborate with industry & academia to address technology shortfalls



EW/IO Strategic Summary

- NSWC Crane is the Department of Defenses largest Electronic Warfare footprint that is multi-spectral/multi-domain
 - We have capabilities and credentials in the five critical areas:
 - Electronic Warfare / Information Operations Leadership
 - Spectrum Management / Cyber Warfare
 - Irregular Warfare
 - Sensor Integration
 - Technology Transition
 - We need partnerships between government, industry and academia to meet future demands



Naval Surface Warfare Center Crane Division



